File View Edit Tools Window Help

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(11) ((((((goetz-werner-k.in. camras-michael-d.in.
(4) (("5747832"|"5753939"|"5804839"|"5987047"|"6005
(4) (US-6657300-$ or US-5747832-$ or US-5804839-$).
(35) ((((light adj emit$4 adj diode) and ("n-type"
(18) (((((light adj emit$ adj diode) or (laser adj
(18) ((((((light adj emit$ adj diode) or (laser adj
(38) (emit$4 adj diode) and substrate and ((((p-typ
(24) ((emit$4 adj diode) and substrate and ((((p-ty
(6) ((light adj emitting adj diode) or (light-emitt
(3) (((light adj emitting adj diode) or (light-emit
(37) "LED" and substrate and ((((p-type) adj layer)
(233) "LED" and substrate and ((((p-type)) or (p ad
(10) ("LED" and substrate and ((((p-type) adj layer
(181) ("LED" and substrate and ((((p-type)) or (p a
(66) (("LED" and substrate and ((((p-type)) or (p a
(66) ((("LED" and substrate and ((((p-type)) or (p
(66) ((("LED" and substrate and ((((p-type)) or (p
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UPC
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QBs: USPAT, US-PGPUB, EPO, JPO, IBM_TDB   P Plurals

Default operator: OR   Highlight all hit terms initially

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((light adj emitting adj diode) or (light-emitting adj diode)) and
(((chang$4 or var$5) adj concentration) same ((p-type) or (p adj
type)) adj layer)
```

BRS form   IS&R form   Image   Text   HTML

U	⇅	PT	P	Document ID	Kind Code	Source	Issue Dat	Pages	Title	Curr
1	☐	☑	☐	☐	US 20040075097	US-PGP UB	20040422	11	Formation of Ohmic contacts in III-nitride light emitting devices	257/
2	☐	☑	☐	☐	US 6657300 B2	USPAT	20031202	11	Formation of ohmic contacts in III-nitride light emitting devices	257/
3	☐	☐	☐	☐	US 20030205736	US-PGP UB	20031106	39	Nitride semiconductor device	257/
4	☐	☐	☐	☐	US 20020053676	US-PGP UB	20020509	39	Nitride semiconductor device	257/
5	☐	☐	☐	☐	US 20020008243	US-PGP UB	20020124	15	Formation of ohmic contacts in III-nitride light emitting devices	257/
6	☑	☐	☐	☐	US 6586762 B2	USPAT	20030701	37	Nitride semiconductor device with improved lifetime and high output power	257/

Hits Details HTML

Ready   NUM

L Number	Hits	Search Text	DB	Time stamp
-	20	goetz-werner-k.in.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:12
-	0	camras-cichael-d.in.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:12
-	27	camras-michael-d.in.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:12
-	23	chen-changhua.in.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:13
-	8	christenson-gina-l.in.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:13
-	8	kern-scott-r.in.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:13
-	25	kuo-chihping.in.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:13
-	7	martin-paul-scott.in.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:13
-	58	steigerwald-daniel-a.in.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:13
-	30	kern-r-scott.in.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:13
-	79	(goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:13
-	47	((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:13
-	45	(((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:13

-	38	((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:13
-	11	(((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III"	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:13
-	1252	(light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:13
-	36	((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:14
-	1	"20040075097"	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:14
-	5	("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:14
-	128	goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:14
-	35	(((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) not ("20040075097" (("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) (goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.))	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:14
-	433	(light adj emit$ adj diode or (laser adj diode) and (("GaN" or (gallium adj nitride)) with (type or concentration) with (variation or chang$4 or increas$4 or decreas$4) with concentration)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:15

| - | 405 | (((light adj emit$ adj diode) or (laser adj diode)) and (((p-type) or (p adj type)) with (varying or variation or chang$4 or increas$4 or decreas$4) with concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) (((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) "20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) (((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) (((("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.) ((((((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type))) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) not ("20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) (goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.))) and (substrate and (contact$4 or electrode)))) | USPAT; US-PGPUB; EPO; JPO; IBM_TDB | 2004/08/13 16:22 |

-	169	`((((light adj emit$ adj diode) or (laser adj diode)) and (((p-type) or (p adj type)) with (varying or variation or chang$4 or increas$4 or decreas$4) with concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) (((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type))) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) "20040075097" (("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) ((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) ((("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.) ((((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride))))) and (("GaN" or (gallium adj nitride))`	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:15
-	11	(garbled overlapping text)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:18
-	4	(garbled overlapping text)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:18
-	4	`(US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.`	USPAT; US-PGPUB	2004/08/13 16:18
-	35	`((((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) not ("20040075097" (("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) (goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.))) and (substrate and (contact$4 or electrode))`	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:18

| | | 18 | (((((light adj emit$ adj diode) or (laser adj diode)) and (((p-type) or (p adj type)) with (varying or variation or chang$4 or increas$4 or decreas$4) with concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) (((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) "20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) ((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) ((("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.) (((((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride))))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) not ("20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) | USPAT; US-PGPUB; EPO; JPO; IBM_TDB | 2004/08/13 16:19 |

(goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.))) and (substrate and (contact$4 or electrode))))) and ("GaN" or (gallium adj nitride)) and substrate and ((active or emit$4) adj layer)) and (((light adj emit$ adj diode) or (laser adj diode))).ti. and (((p-type) or (p adj type)) with (varying or variation or chang$4 or increas$4 or decreas$4) with concentration)

-		18	((((((light adj emit$ adj diode) or (laser adj diode)) and (((p-type) or (p adj type)) with (varying or variation or chang$4 or increas$4 or decreas$4) with concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) (((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) "20040075097" (("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) ((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) ((("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.) ((((((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) not ("20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) (goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.))) and (substrate and (contact$4 or electrode))))) and ("GaN" or (gallium adj nitride)) and substrate and ((active or emit$4) adj	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:19
-		38	layer$4 and diode) and substrate and diode) or ((p-type adj diode) or (pnd (type adj bay p) adj type contact (ray en grode)) and variation or change$4 near2 concentration) decreas$4) with concentration)) not ((((((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) not ("20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) (goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.))) and (substrate and (contact$4 or electrode)))	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 17:12

-	24	((emit$4 adj diode) and substrate and ((((p-type) adj layer) or (p adj type adj layer)) with (contact or electrode)) and ((var$5 or chang$4) near2 concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) "20040075097" (("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) ((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) (((("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.) (((((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride))	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 17:13
-	6	(garbled overlapping text) ((emit$4 or var$5) emit$4 "20040075097" and (("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in.	USPAT; US-PGPUB; IBM_TDB	2004/08/13 16:59
-	3	(garbled overlapping text) (light adj emit$4 adj diode)) and (var$5 or chang$4 adj concentration) kern-r (p-type) or (US-6657300-$ adj US-5747832-$ (goetz-werner-k.in did. or christenson-gina-l.in did) changhua substrate and christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:59
-	37	"LED" and substrate and ((((p-type) adj layer) or (p adj type adj layer)) with (contact or electrode)) and ((var$5 or chang$4) near2 concentration)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 17:12
-	233	"LED" and substrate and ((((p-type)) or (p adj type)) with (contact or electrode)) and ((var$5 or chang$4) near2 concentration)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 17:13

| - | 10 | ("LED" and substrate and ((((p-type) adj layer) or (p adj type adj layer)) with (contact or electrode)) and ((var$5 or chang$4) near2 concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) "20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) ((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) ((("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.) ((((((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) not ("20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) (goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.))) and (substrate and (contact$4 or electrode))) ((((((light adj emit$ adj diode) or (laser adj diode)) and (((p-type) or (p adj type)) with (varying or variation or chang$4 or increas$4 or decreas$4) with concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) (((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) "20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) ((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) ((US-6657300-$ or | USPAT; US-PGPUB; EPO; JPO; IBM_TDB | 2004/08/13 17:15 |

| - | 181 | ("LED" and substrate and ((((p-type)) or (p adj type)) with (contact or electrode)) and ((var$5 or chang$4) near2 concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) "20040075097" (("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) ((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) ((("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.) (((((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) not ("20040075097" (("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) (goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.))) and (substrate and (contact$4 or electrode))) ((((((light adj emit$ adj diode) or (laser adj diode)) and (((p-type) or (p adj type)) with (varying or variation or chang$4 or increas$4 or decreas$4) with concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) (((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) "20040075097" (("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) ((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) ((("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or | USPAT; US-PGPUB; EPO; JPO; IBM_TDB | 2004/08/13 17:15 |

-	66	("LED" and substrate and ((((p-type)) or (p adj type)) with (contact or electrode)) and ((var$5 or chang$4) near2 concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) "20040075097" (("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) ((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) (((("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.) (((((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) not ("20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) (goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.))) and (substrate and (contact$4 or electrode))) (((((((light adj emit$ adj diode) or (laser adj diode)) and (((p-type) or (p adj type)) with (varying or variation or chang$4 or increas$4 or decreas$4) with concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) (((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) "20040075097" (("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) ((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) (((("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type)) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 17:16

| - | 66 | ((("LED" and substrate and ((((p-type)) or (p adj type)) with (contact or electrode)) and ((var$5 or chang$4) near2 concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) "20040075097" (("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) ((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 · adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) ((("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.) ((((((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) not ("20040075097" (("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) (goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.))) and (substrate and (contact$4 or electrode))) ((((((light adj emit$ adj diode) or (laser adj diode)) and (((p-type) or (p adj type)) with (varying or variation or chang$4 or increas$4 or decreas$4) with concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) (((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) "20040075097" (("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) ((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) ((("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or | USPAT; US-PGPUB; EPO; JPO; IBM_TDB | 2004/08/13 17:17 |

| - | | 66 | ((("LED" and substrate and ((((p-type)) or (p adj type)) with (contact or electrode)) and ((var$5 or chang$4) near2 concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) "20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) (((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) (((("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.) ((((((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) not ("20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) (goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.))) and (substrate and (contact$4 or electrode))) ((((((light adj emit$ adj diode) or (laser adj diode)) and (((p-type) or (p adj type)) with (varying or variation or chang$4 or increas$4 or decreas$4) with concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) (((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) "20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) (((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) (((("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or | USPAT; US-PGPUB; EPO; JPO; IBM_TDB | 2004/08/13 17:18 |